2011 EPA Region 4 Air Monitoring Workshop

Tampa, FL ▪ April 26 - 28, 2011

Region 4 Air Toxics Monitoring Updates

Donnette Sturdivant, EPA Region 4

April 28, 2011

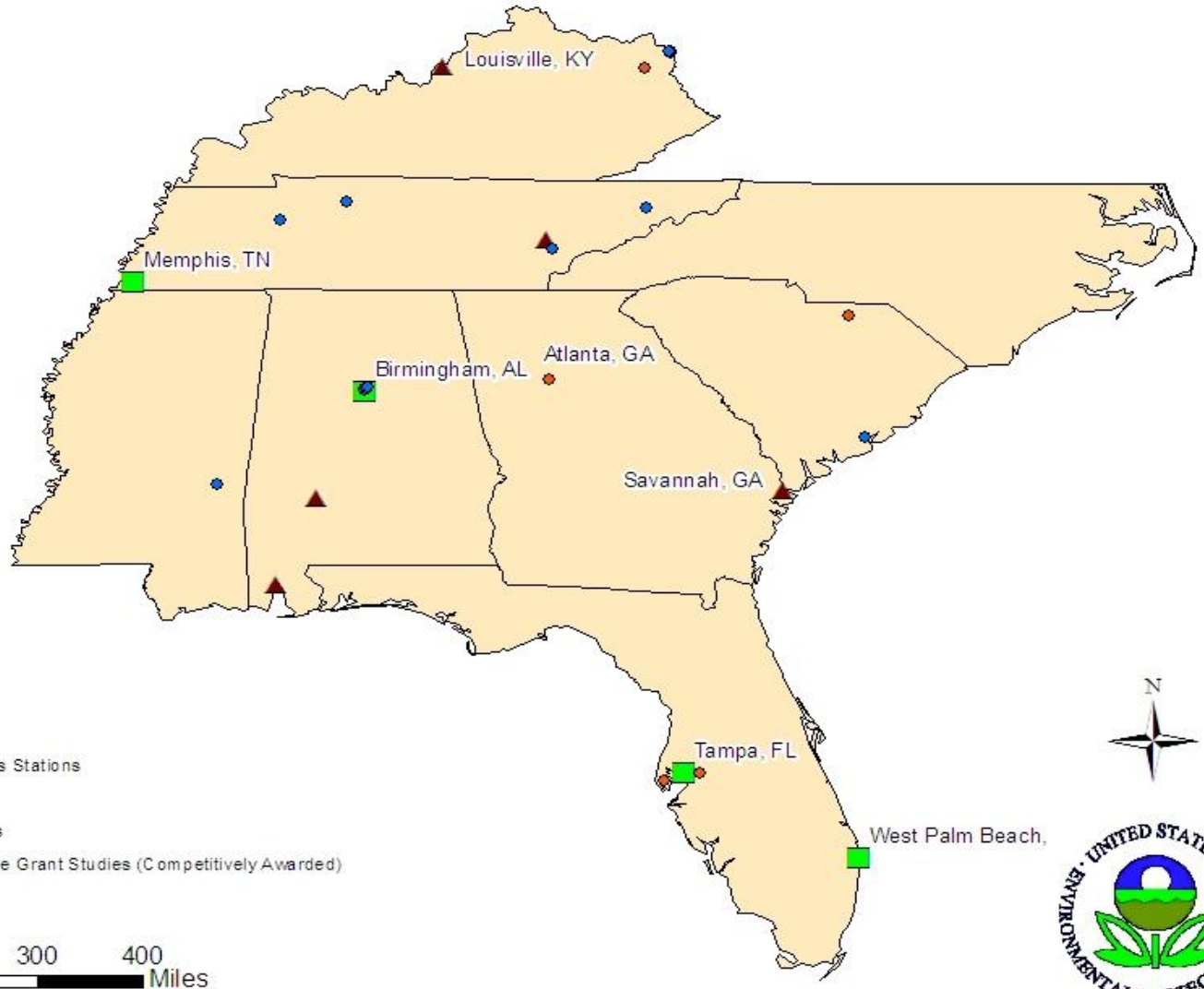
Agenda

- National Air Toxics & Data Analysis Workshop Overview
- National Air Toxics Trends Stations (NATTS)
  - Program Overview
  - Data Reporting Assessment
  - Network Assessment
- Community-Scale Air Toxics Monitoring Grants
  - 2011 Request for Proposals (RFP)
- School Air Toxics Initiative
- Region 4 Initiatives
  - Birmingham Air Toxics Initiative

National Air Toxics & Data Analysis Workshop

- April 4-7, 2011; Dallas, TX
- HQ, Regions, States, Locals, Tribes
- Training
  - NATA 2005
  - Developing Air Toxics Monitoring Projects
- Topics/Issues
  - Air Toxics Strategy
  - NATTS; BP Oil Spill; Regional & S/L/T Updates; Technical Sessions; Breakout Sessions on Future of Air Toxics
  - Emphasis placed on reducing air toxics emissions in communities; particularly low income, minority and indigenous populations

EPA Region 4 Air Toxics Studies



National Air Toxics Trends Stations (NATTS)

Objectives/Uses of Data

- ✓ Provide quality assured, standardized ambient data
  - Identify and assess trends across national sites (urban and rural); 27 sites established
  - Ground truth air quality and human exposure models
  - Direct input into source-receptor models
  - Assess exposure and risk

National Air Toxics Trends Stations (NATTS)

VOCs
Acrolein
Benzene
Chloroform
1,3-butadiene
Vinyl Chloride
Perchloroethylene
Carbon Tetrachloride
Trichloroethylene
1,2-dichloropropane
Dichloromethane

Carbonyls
Formaldehyde
Acetaldehyde

PAHs
Benzo(a)pyrene
Naphthalene

PM10 Metals
Nickel compounds
Arsenic compounds
Cadmium compounds
Manganese compounds
Beryllium compounds
Lead compounds

TSP Hexavalent Chromium

National Air Toxics Trends Stations (NATTS)

- Sampling
  - 1 in 6 day frequency
  - 10% field blanks
- Analysis
  - Specific methods and target MDLs
  - 10% replicate analyses
- Reporting
  - Data to AQS within 120 days
  - Data below MDL

National Air Toxics Trends Stations (NATTS)

Region 4 Sites

- **3 Urban Sites**
  - South Dekalb County, Georgia
  - Hillsborough County, Florida
  - Pinellas County, Florida
- **2 Rural Sites**
  - Grayson Lake (Elliott & Carter Counties), Kentucky
  - Chesterfield County, South Carolina

NATTS Data Reporting Assessment

- In anticipation of network assessment, OAQPS conducted data “pre-screen” (Data Reporting Assessment)
  - Data retrieval
    - Nineteen required analytes
    - All NATTS (2003 – 2009)
  - Assessed
    - Requisite data present
    - MDLs
    - Data completeness
    - Data censoring, flagging, etc.

NATTS Data Reporting Assessment

Results

- ✓ Most sites monitored / reported for all requisite HAPs
- ✓ Data completeness – generally good
- ✓ Data censoring – not prevalent
- ✓ Data flagging – spotty / inconsistent
- ✓ MDLs
  - Not everyone reports them
  - Good news: significant improvement with time

NATTS Network Assessment

Purpose/Process

- "…the NATTS must be evaluated, and modified as needed, on 6-year intervals to assure continued relevancy…"
  National Ambient Air Monitoring Strategy – Air Toxics Component, Section 1, Pg. 6
- Assessment will include data through 2010
- All 2010 data in AQS by 3/31
- OAQPS data retrieval on 4/1
- Data verification by 5/2
- OAQPS provides data to contractor
  - Network assessment begins
- Assessment structured as series of discreet steps
  - Interim deliverables

NATTS Network Assessment

Focus Areas

- ✓ Degree to which network has met stated goals and objectives?
- ✓ Continued relevance of network goals and objectives?
  - Optimal for addressing current and projected program priorities / data needs?
  - If not, revised goals and objectives?
- ✓ Adequacy of number and location of sites?
  - Appropriate geographic distribution and urban / rural mix?
  - Appropriately sited for urban- or rural-scale representativeness?

Community-Scale Air Toxics Ambient Monitoring Grants

- Competitively awarded, short term (2-3 years) grant / cooperative agreement projects
- Grant competition centrally managed by Program Office
- Awards and post-award oversight by Regional Offices
- Funded with STAG Section 103
- Eligibility limited to state, local, and tribal Air Pollution Control Agencies

Community-Scale Air Toxics Ambient Monitoring Grants

- Principle objective is to assist state, local and tribal communities in:
  - Characterizing the degree and extent of local-scale air toxics problems
  - Identifying and profiling air toxics sources
  - Tracking progress of air toxics reduction activities
  - Developing and assessing emerging measurement methods

Community-Scale Air Toxics Ambient Monitoring Grants

Overview

- Request For Proposals (RFP) published on 3/22/11
- Notification of availability via Air Monitoring List Server
  - http://www.epa.gov/air/grants_funding.html
- applicant eligibility is limited to "... air pollution control agencies, as defined by Section 302(b) of the Clean Air Act (CAA), that are also eligible to receive grants under section 105 of the Clean Air Act, and/or federally recognized tribes."
- Proposals due NLT 4 PM ET on 5/23/11
- Projected Timeline
  - Award recommendations / notifications late July / August
  - Awards September through ?

Community-Scale Air Toxics Ambient Monitoring Grants

Focus Areas

- ✓ Community-Scale Monitoring
  - Characterize community exposures / assess risk
  - Identify / profile source(s)
  - Establish baseline / assess impacts
- ✓ Methods Evaluation
  - New or alternative for priority HAPs
- ✓ Analysis of Existing Data
  - Previously collected but not analyzed / interpreted
  - Objectives consistent with Community-Scale Monitoring

Community-Scale Air Toxics Ambient Monitoring Grants

New RFP Updates

- Use / application of results or outputs (i.e., outcomes)
  - Interim final report (conclusion of output phase)
  - Final report (6-9 months later; outcomes)
- Environmental Justice
  - "… extent to which the proposed project addresses environmental justice issues and concerns…"
- Community Collaboration / Outreach
  - "… collaborative interaction and involvement with the local affected community…"

Community-Scale Air Toxics Ambient Monitoring Grants

- Questions & Answers: Refer to several websites listed in RFP
- Contact Mike Jones, OAQPS, at jones.mike@epa.gov
- Visis the AMTIC website to view prior RFPS, Q&As, proposals, and final report. http://www.epa.gov/ttn/amtic/local

School Air Toxics Initiative (SAT)

Background

- Assess potentially elevated ambient air toxics levels at various school in the nation
- School selection based on:
  - 2002 NATA
  - 2008 USA Today Study
  - Recommendations from Regions, States, Local Agencies
  - 63 schools in 22 states; 2 tribal schools selected
- Other Criteria for Selection
  - Near large industrial sources
  - Urban areas near interstates or airports
  - Mix of large and small sources

School Air Toxics Initiative (SAT)

- Region 4: 13 sites in 5 states
  - Alabama (4) – coke oven emissions
  - Kentucky (3) – coke oven emissions
  - South Carolina (1) – VOCs, PM10 metals, Cr+6, Carbonyls
  - Mississippi (1) – Acrolein
  - Tennessee (4) – diisocyanates, PM10 metals
- Initial monitoring completed at all sites
- Additional monitoring recommended for sites in:
  - TN: reduction is source productivity
  - MS: monitoring method issues
  - AL: elevated levels of select pollutants/ inconclusive data
- Summary reports are being finalized and posted to EPA's school air website; 4 posted for TN

Birmingham Air Toxics Monitoring Study

- School Air Toxics (SAT) monitoring conducted at 4 schools in AL for VOCs, PAHs, metals
- 2 of the 4 schools were recommended for additional monitoring due to inconclusive data
- Additional monitoring expanded to 4 sites; 2 additional sites added to assess community exposure in EJ areas
- Schedule extended to 12 months; 1:6 day sampling frequency
- Focus on VOCs, PAHs, and metals (coke oven emissions from a nearby coke plant)
- Develop risk assessment after 1 year

Birmingham Air Toxics Monitoring Study

- A more comprehensive study to assess air quality issues in the Birmingham area has been developed which includes monitoring and voluntary program awareness
- Voluntary programs including Tools for Schools, Energy Star, Children's Health, Asthma, Mold, and Radon awareness
- Region 4 is partnering the Jefferson County, AL & local schools in this effort
- Additional efforts will focus on improving community relations through community engagement activities

Donnette Sturdivant

sturdivant.donnette@epa.gov

404-562-9431